Math 212
Quiz 33

M 21 Nov 2016

Your name: _____

Exercise

(2 pt) For each of the following vector fields $\mathbf{F} : \mathbf{R}^3 \to \mathbf{R}^3$, write "Conservative" if $\mathbf{F}$ is conservative, and "Not conservative" otherwise. Justify your answer. *Hint:*

> Conservative? Liberal? Head in a whirl —
> For vector-field politics, compute the _____.

(a) (1 pt) $\mathbf{F}(x, y, z) = (e^z, 1, xe^z)$

(b) (1 pt) $\mathbf{F}(x, y, z) = (ye^{-x}, e^{-x}, 2z)$